## IN THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Previously Presented) A temperature sensor, comprising:

a device adapted to provide a first signal having a parameter responsive to temperature; and

a generator adapted to provide a reference signal having a parameter that is substantially consistent over a preselected temperature range;

a comparator electrically coupled to the device and the generator and adapted to provide a second signal in response to the parameter of the first signal differing from the parameter of the reference signal; and

a digital filter coupled to the comparator and adapted to provide a third signal in response to receiving the second signal for a preselected duration of time, wherein the temperature sensor is in thermal communication with at least a portion of a semiconductor memory unit and controls refreshing in the semiconductor memory unit over the preselected temperature range.

2. (Original) A temperature sensor, as set forth in claim 1, wherein the comparator is further adapted to deliver the second signal in response to the parameter of the first signal rising above the parameter of the reference signal, and to discontinue delivery of the second signal in response to the parameter of the first signal falling below the parameter of the reference signal by a preselected magnitude.

3. (Original) A temperature sensor, as set forth in claim 1, wherein the comparator is further adapted to deliver the second signal in response to the parameter of the first signal falling below the parameter of the reference signal, and to discontinue delivery of the second signal in response to the parameter of the first signal rising above the parameter of the reference signal by a preselected magnitude.

4. (Original) A temperature sensor, as set forth in claim 1, wherein the comparator includes a hysteresis effect.

5. (Original) A temperature sensor, as set forth in claim 1, wherein the digital filter is adapted to provide the third signal in response to receiving a plurality of second signals over a preselected duration of time.

6. (Original) A temperature sensor, as set forth in claim 1, wherein the digital filter is adapted to provide the third signal in response to receiving a plurality of second signals over a preselected duration of time without interruption.

7. (Original) A temperature sensor, as set forth in claim 1, wherein the sensor is at least partially formed within a common substrate with the device.

8. (Original) A temperature sensor, as set forth in claim 1, wherein:

the generator is adapted to provide a first and second reference signal, each having a parameter that is substantially consistent over a preselected temperature range;

the comparator is electrically coupled to the device and the generator and adapted to provide a fourth signal in response to the parameter of the first signal being less than the parameter of the first reference signal, a fifth signal in response to the parameter of the first signal being greater than the first reference signal and less than the second reference signal, and a sixth signal in response to the parameter of the first signal being greater than the second reference signal; and

the digital filter is coupled to the comparator and adapted to provide a seventh signal in response to receiving the fourth signal for a preselected duration of time, an eighth signal in response to receiving the fifth signal for a preselected duration of time, and a ninth signal in response to receiving the sixth signal for a preselected duration of time.

9. (Original) A temperature sensor, as set forth in claim 8, wherein the comparator comprises first and second comparators.

10. (Original) A temperature sensor, as set forth in claim 8, wherein the comparator comprises a multiplexer and a comparator, wherein the multiplexer is configured to selectively couple the first and second reference signals to the comparator.

11. (Previously Presented) A temperature sensor, as set forth in claim 1, wherein:

the generator is adapted to provide a first and second reference signal, each having a parameter that is substantially consistent over a preselected temperature range; and

the comparator is electrically coupled to the device and the generator and adapted to provide distinct signals in response to detecting the first signal being within distinct preselected ranges defined by the first and second reference signals.

12. (Previously Presented) A method, comprising:

monitoring temperature of at least a portion of a semiconductor memory unit for generating a first signal having a parameter responsive to the temperature;

generating a reference signal having a parameter that is substantially consistent over a preselected temperature range;

generating a second signal in response to the parameter of the first signal differing from the parameter of the reference signal; and

generating a third signal in response to the second signal persisting for a preselected duration of time, wherein the third signal controls refreshing in the semiconductor memory unit over the preselected temperature range.

13. (Original) A method, as set forth in claim 12, wherein generating the second signal in response to the parameter of the first signal differing from the parameter of the reference signal further comprises delivering the second signal in response to the parameter of the first signal rising above the parameter of the reference signal, and discontinuing delivery of the second signal in response to the parameter of the first signal falling below the parameter of the reference signal by a preselected magnitude.

14. (Original) A method, as set forth in claim 12, wherein generating the second signal in response to the parameter of the first signal differing from the parameter of the reference signal further comprises delivering the second signal in response to the parameter of the first signal falling below the parameter of the reference signal, and discontinuing delivery of the second signal in response to the parameter of the first signal rising above the parameter of the reference signal by a preselected magnitude.

15. (Original) A method, as set forth in claim 12, wherein generating the second signal in response to the parameter of the first signal differing from the parameter of the reference signal further comprises includes generating the second signal with a hysteresis effect.

16. (Original) A method, as set forth in claim 12, wherein generating the third signal in response to the second signal persisting for a preselected duration of time further comprises providing the third signal in response to receiving a plurality of second signals over a preselected duration of time.

17. (Original) A method, as set forth in claim 12, wherein generating the third signal in response to the second signal persisting for a preselected duration of time further comprises providing the third signal in response to receiving a plurality of second signals over a preselected duration of time without interruption.

18. (Original) A method, as set forth in claim 12, wherein generating the first signal having a parameter responsive to temperature further comprises generating the first signal having a parameter responsive to a temperature associated with a semiconductor device.

19. (Original) A method, as set forth in claim 12, wherein:

generating the reference signal having a parameter that is substantially consistent over a preselected temperature range further comprises generating a first and second reference signal, each having a parameter that is substantially consistent over a preselected temperature range;

generating the second signal in response to the parameter of the first signal differing from the parameter of the reference signal further comprises providing a fourth signal in response to the parameter of the first signal being less than the parameter of the first reference signal, a fifth signal in response to the parameter of the first signal being greater than the first reference signal and less than the second reference signal, and a sixth signal in response to the parameter of the first signal being greater than the second reference signal; and

generating the third signal in response to the second signal persisting for a preselected duration of time further comprises providing a seventh signal in response to receiving the fourth signal for a preselected duration of time, an eighth signal in response to receiving the fifth signal for a preselected duration of time, and a ninth signal in response to receiving the sixth signal for a preselected duration of time.

20. (Previously Presented) A temperature sensor, comprising:

means for monitoring temperature of at least a portion of a semiconductor memory unit for generating a first signal having a parameter responsive to the temperature;

means for generating a reference signal having a parameter that is substantially consistent over a preselected temperature range;

means for generating a second signal in response to the parameter of the first signal differing from the parameter of the reference signal; and

means for generating a third signal in response to the second signal persisting for a preselected duration of time, wherein the third signal controls refreshing in the semiconductor memory unit over the preselected temperature range.

21. (Previously Presented) A system, comprising:

a memory;

a microprocessor adapted to controllably access the memory; and

a temperature sensor, comprising:

a device adapted to monitor temperature of at least a portion of a semiconductor memory unit for providing a first signal having a parameter responsive to the temperature of said memory;

a generator adapted to provide a reference signal having a parameter that is substantially consistent over a preselected temperature range;

a comparator electrically coupled to the device and the generator and adapted to provide a second signal in response to the parameter of the first signal differing from the parameter of the reference signal; and

a digital filter coupled to the comparator and adapted to provide a third signal in response to the second signal persisting for a preselected duration of time, wherein the third signal controls refreshing in the semiconductor memory unit over the preselected temperature range.